

ABSTRACT OF THE DISCLOSURE

A decompression valve incorporated in a gas decompression device valve of fuel cell system is divided into a measuring room and a back pressure room by a diaphragm. A valve seat and a valve body adjoining to the measuring room are arranged on the decompression valve. When gas pressure works on the diaphragm, the diaphragm is displaced to move in a direction for making the valve body closer to the valve seat. Pressure control springs arranged on the decompression valve urge the diaphragm in a direction to make the valve body separate from the valve seat. The diaphragm, pressure control springs and the like allow hydrogen gas to pass the valve seat, whereby hydrogen gas from an outlet is decompressed. The gas decompression further comprises a pressure switch valve which adjusts urging force of the pressure control spring by back pressure, a flow rate sensor which detects gas flow rate at the outlet, and an electronic control unit which controls the pressure switch valve so as to adjust back pressure depending on gas flow rate.